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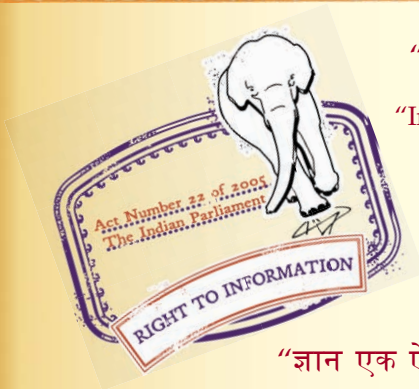
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IS 4567 (1968): Pliers Terminal Device, Quick-grip, for Artificial Limbs [MHD 10: Medical Laboratory Instruments]



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IS: 4567 - 1968

Indian Standard (Reaffirmed 1978)

SPECIFICATION FOR
PLIERS TERMINAL DEVICE, QUICK-GRIP,
FOR ARTIFICIAL LIMBS

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Indian Standard

SPECIFICATION FOR PLIERS TERMINAL DEVICE, QUICK-GRIP, FOR ARTIFICIAL LIMBS

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Indian Standard

SPECIFICATION FOR PLIERS TERMINAL DEVICE, QUICK-GRIP, FOR ARTIFICIAL LIMBS

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 23 April 1968, after the draft finalized by the Artificial Limbs Sectional Committee had been approved by the Consumer Products Division Council.

0.2 Formulation of Indian Standards on artificial limbs, prosthetic and orthotic appliances and rehabilitation equipment has been taken up at the instance of the Advisory Committee for Development of Surgical Instruments, Equipment and Appliances, Government of India.

0.3 Terminal devices for artificial limbs are working accessories to be fitted into the dress or working arm of an amputee of the upper extremity. These devices aid the amputee to perform some of the normal functions of the hand.

0.4 This standard is one of a series of Indian Standards on terminal devices for artificial limbs. Other specifications in the series are:

IS:4534-1968 Adapter for terminal devices, artificial limbs

IS:4535-1968 Saw-grip terminal device for artificial limbs

IS:4554-1968 Hammers terminal devices, ball pein and claw, for artificial limbs

IS:4555-1968 Biprong terminal device, draughtsman, for artificial limbs

IS:4556-1968 Typing finger terminal device for artificial limbs

IS:4557-1968 Appliance, office, flat adjustable, for artificial limbs

IS:4577-1968 Spade-grip terminal device for artificial limbs

0.5 This standard is a necessary adjunct to IS : 4534-1968*.

0.6 This standard contains a clause **8.1** which calls for an agreement between the purchaser and the supplier.

*Specification for adapter for terminal devices, artificial limbs.

0.7 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test, shall be rounded off in accordance with IS:2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

1. SCOPE

1.1 This standard specifies the requirements pertaining to materials, shape, dimensions, manufacture, workmanship, finish and performance for quick-grip pliers terminal device.

2. MATERIAL

2.1 Quick-grip pliers shall be manufactured from carbon steel conforming to Designations T65, T70 or T75 of Schedule VI of IS:1570-1961†. The rivet and pins for the joints shall be manufactured from steel conforming to IS:1148-1964‡. The strip used for making spring shall conform to Grade 4 of Table 1 of IS:2507-1965§.

3. SHAPE AND DIMENSIONS

3.1 The general shape and dimensions of the pliers shall be as given in Fig. 1.

4. MANUFACTURE, WORKMANSHIP AND FINISH

4.1 The arms of pliers shall be solid-forged to shape. The rivet shall be firm in one of the arms and free in the other. The jaws shall be properly hardened and tempered. The serrations shall be neatly cut to provide a firm grip. The pliers shall be free from pits, cracks, scale, seams, fins and other defects. They shall be finished smooth all over and sharp edges shall be removed. The pliers shall work freely without any play or undue stiffness at the joints. The jaws of the pliers shall be in perfect alignment with each other and shall meet completely and evenly in the closed position except at the openings. The pliers except the spring, shall be plated chromium over nickel. The plating shall conform to Grade C of IS:1068-1958||.

5. HARDNESS

5.1 The pliers shall be hardened and tempered to give a hardness of 350 to 400 HV at the jaws.

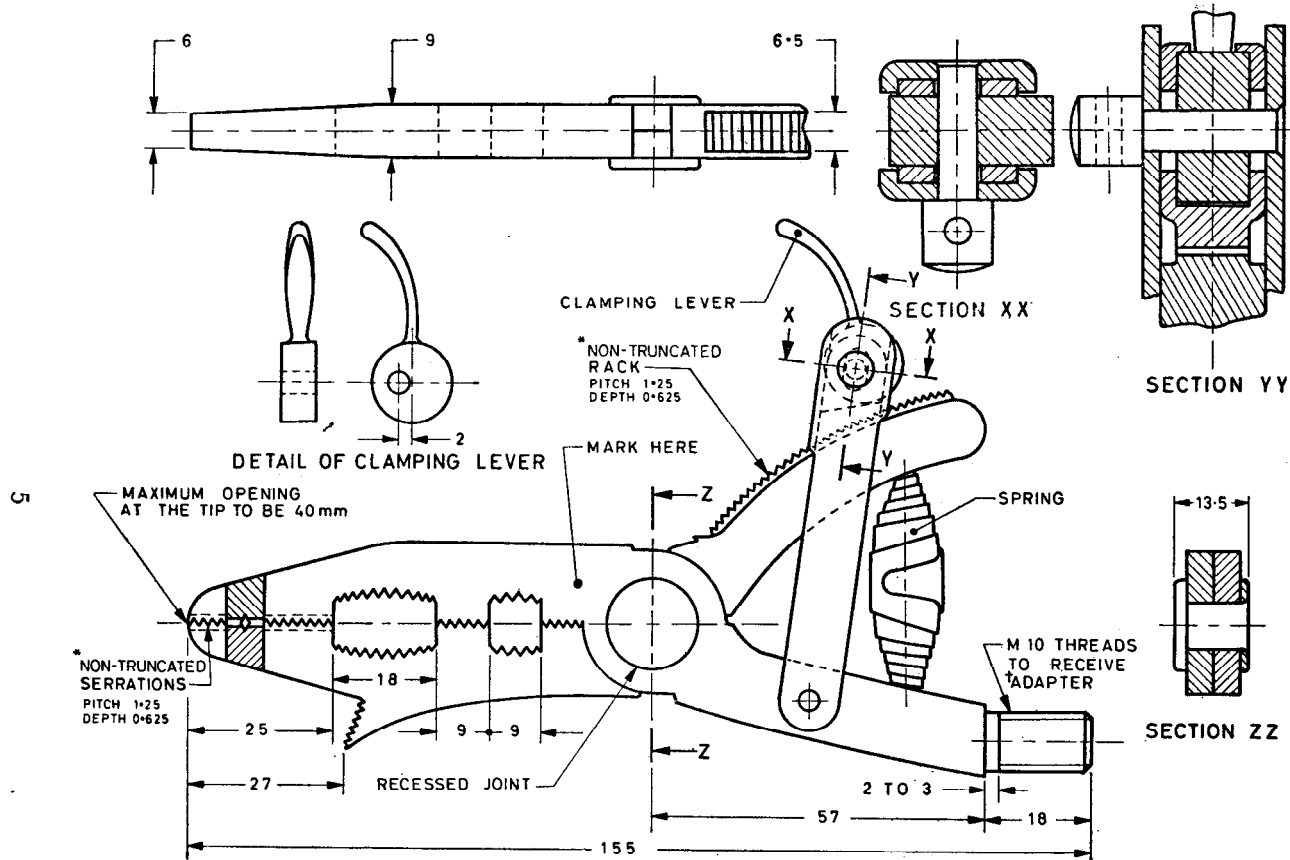
*Rules for rounding off numerical values (*revised*).

†Schedules for wrought steels for general engineering purposes.

‡Specification for rivet bars for structural purposes (*revised*).

§Specification for cold rolled steel strip for springs.

||Specification for copper, nickel and chromium electroplated coatings.



*See IS : 3642-1966 General requirements for surgical instruments.

†See IS : 4534-1968 Specification for adapter for terminal devices, artificial limbs.

All dimensions in millimetres.

FIG. 1 PLIERS TERMINAL DEVICE, QUICK-GRIP, FOR ARTIFICIAL LIMBS

6. TESTS

6.1 Tube Gripping Test — A piece of mild steel pipe of 15 mm nominal diameter shall be held in a vice securely and gripped with the pliers at the pipe grip. The pliers shall then be rotated as though attempting to turn the pipe in the vice. The pipe shall not rotate but shall get marked fairly uniformly by the jaw serrations and the latter shall not be damaged.

6.2 Shock Test — The pliers shall be capable of withstanding, without sign of injury or deterioration, the test of having the nose struck with normal manual force against a mild steel block while being held manually by the adapter-end.

7. MARKING

7.1 The pliers shall be clearly and legibly stamped with the manufacturer's name, initials or recognized trade-mark.

7.1.1 The pliers may also be marked with the ISI Certification Mark.

NOTE — The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (Certification Marks) Act, and the Rules and Regulations made thereunder. Presence of this mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard, under a well-defined system of inspection, testing and quality control during production. This system, which is devised and supervised by ISI and operated by the producer, has the further safeguard that the products as actually marketed are continuously checked by ISI for conformity to the standard. Details of conditions, under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.

8. PACKING

8.1 The pliers shall be packed in the manner as agreed to between the purchaser and the supplier.

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About 4 500 Indian Standards, broadly classified under the following main heads, have been issued so far:

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